

Amendments to the Drawings

The attached sheet of drawings includes changes to Fig. 15. This sheet replaces the original sheet of drawings.

Attachment: Replacement sheet

Remarks

Claims 1-41 are currently pending. By this Amendment, claims 1, 16, 38 and 39 are amended. After entry of this Amendment, claims 1-41 will be pending. Reconsideration in view of the following remarks is respectfully requested.

Objection to Drawings and Disclosure

The Office action objects to the drawings for allegedly failing to comply with 37 C.F.R. § 1.84(p)(4) because reference character “32” has been used to designate both the “inner head” and the “second sides.”

As shown in the replacement sheet attached herewith, Applicant has revised the drawings to replace the reference character “32” in Fig. 15 with reference character “37.” Applicant has correspondingly amended the paragraph beginning on page 10, line 11 of the specification to reflect this change.

Based on the foregoing, Applicant respectfully requests that the objection to the drawings and disclosure be withdrawn.

Rejection of Claims 1-41 Under 35 U.S.C. § 112

Claims 1-41 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant respectfully traverses this rejection.

Claim 1

As to claim 1, the Office action alleges that the claimed association of the tire, studs and installation tool is ambiguous.

Applicant has amended claim 1 to recite that the top bowl of the outer head of the studs is “nearer to the rolling surface when the stud is installed in said tread” and that the jaw fingers are “capable of being in contact with at least two such first side portions of the bottom flange of the anti-slip stud” (emphasis added). Applicant submits that the amendments to claim 1 are sufficient to overcome the § 112 rejection of this claim. Accordingly, withdrawal of the § 112 rejection of claim 1 is respectfully requested.

Claims 38 and 39

As to claims 38 and 39, the Office action alleges that it is unclear how many plunger pins are being claimed.

Applicant has amended claims 38 and 39 to recite “pressing said anti-slip stud by said plunger pin into the stud recess” (emphasis added). Applicant submits that the amendments to claims 38 and 39 are sufficient to overcome the § 112 rejection of these claims. Accordingly, withdrawal of the § 112 rejection of claims 38 and 39 is respectfully requested.

Claims 2-37, 40 and 41

The Office action offers no specific grounds for rejecting claims 2-37, 40 and 41 under § 112. Nevertheless, Applicant has amended independent claim 16 in the same manner as discussed above for claim 1. Accordingly, withdrawal of the § 112 rejection of claim 16, as well as claims 2-15, 17-37, 40 and 41, is respectfully requested.

Rejection of Claims 1-6, 8-22 and 30-41 Under 35 U.S.C. § 103(a)

Claims 1-6, 8-22 and 30-41 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 3,385,742 (“Pettersson”) in view of at least one of U.S. Patent Application Publication No. 2002/0050312 (“Ostrovskis”) and Russian Patent No. 2,152,318 (“Russia”). Applicant respectfully traverses this rejection.

As amended, independent claims 1 and 16 recite a combination for installing anti-slip studs that includes “jaw fingers capable of being in contact with at least two such first side portions of the bottom flange of the anti-slip stud where said center regions are located at a shortest distance from said stud center line, in order to keep the bottom flange and hence the anti-slip stud in a predetermined constant position between said jaw fingers, wherein the anti-slip stud is maintained in the predetermined constant position without the need for a stud injection tube” (emphasis added).

Similarly, as amended, independent claims 38 and 39 recite a method for installing non-round anti-slip studs in a vehicle tire tread that includes orientation of the hard cermet piece of the studs into a predetermined position in the tire where “the hard cermet piece of the studs is

oriented into and maintained in the predetermined position without the need for a stud injection tube” (emphasis added).

Proper stud orientation or positioning is an important factor in the installation of non-circular studs into tires. As described in the present Application, in prior art stud installation devices, proper orientation of studs upon installation into the tire is maintained solely by use of an injection tube or control tube having a similar shape to the shape of the stud. Page 3, lines 8-10; page 4, lines 6-9. In such prior art devices, “jaws must not under any circumstances affect the stud orientation, or else the stud position achieved by the control tube is lost.” Application, page 4, lines 14-15.

In contrast, as claimed and described in the present Application, proper orientation of the studs is maintained by the jaw fingers. Since, in the present Application, it is the jaw fingers that provide proper orientation of the studs, there is no need for a stud injection tube.

Neither Pettersson, Ostrovskis nor Russia, whether considered alone or in combination, teach or suggest orienting studs or stud components into a predetermined position by jaw fingers without the need for a stud injection tube.

As asserted in the Office action, Pettersson, Ostrovskis and Russia each teach guiding a stud through a stud injection tube toward the tread. More specifically, Pettersson teaches an apparatus for fastening spikes having “a bore 20 into which the spikes are moved one by one through a feeder channel 21” and then “into a position between the finger end portions 17a, 18a, 19a.” Column 2, lines 55-60. Ostrovskis teaches an injection pipe 30 “suitable as a device for installing spikes,” “seating spikes” and “mounting spikes.” Page 4, paragraphs 45, 46 and 66. Ostrovskis emphasizes the importance of the injection pipe for properly orienting the spikes. *Id.* at paragraph 46 (“it is important that the clear cross section of the pipe agree as precisely as possible with the outline of the type of spike to be mounted”). Russia teaches a stud installation device having a charging tube and guide tube 11 for feeding and properly orienting the studs. Abstract; Figures 15 and 16. According to the Examiner, “the charging tube and guide tube 11 [of Russia] are provided with guide members for orientation of the antiskid stud.” Action, page 5. Based on the foregoing, a stud injection tube is needed in Pettersson, Ostrovskis and Russia to achieve proper orientation of the studs.

Since Pettersson, Ostrovskis and Russia each require a stud injection tube, or a bore or pipe, to position the studs prior to installing the studs into the tire, the applied combination of

these references fail to teach or suggest maintaining an anti-slip stud or hard cermet piece of a stud in a predetermined position without the need for a stud injection tube.

Based on the foregoing, the combination of Pettersson, Ostrovskis and Russia fail to render obvious each and every feature recited in independent claims 1, 16, 38 and 39. Therefore, withdrawal of the rejection as to these claims is respectfully requested.

Claims 2-6, 8-15, 17-22, 30-37, 40 and 41, being dependent, either directly or indirectly, upon one of base claims 1, 16 or 39, are allowable for at least the same reasons as for the base claims, as well as for the respective additional features recited therein. Accordingly, withdrawal of the rejection as to claims 2-6, 8-15, 17-22, 30-37, 40 and 41 is respectfully requested.

Rejection of Claims 7, 8, 29 and 30 Under 35 U.S.C. § 103(a)

The Office action rejects claims 7, 8, 29 and 30 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia, and further in view of U.S. Patent No. 6,374,886 ("Eromaki"). Applicant respectfully traverses this rejection.

As discussed above, the applied combination of Pettersson, Ostrovskis and Russia fail to render obvious independent claims 1 and 16.

Applicant submits that Eromaki does not provide for the deficiencies of Pettersson, Ostrovskis and Russia. Accordingly, the applied combination of Pettersson, Ostrovskis, Russia and Eromaki would not have rendered obvious the features recited in claims 1 and 16.

Claims 7 and 8, being directly dependent upon base claim 1, and claims 29 and 30, being directly dependent upon base claim 16, respectively, are allowable for at least the same reasons as for the base claims, as well as for the respective additional features recited therein. Therefore, withdrawal of the rejection as to claims 7, 8, 29 and 30 is respectfully requested.

Rejection of Claims 23-28 Under 35 U.S.C. § 103(a)

The Office action rejects claims 23-28 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Pettersson in view of at least one of Ostrovskis and Russia, and further in view of Finland Patent No. 9/65 ("Finland") or Japanese Patent No. 56-146407 ("Japan"). Applicant respectfully traverses this rejection.

As discussed above, the applied combination of Pettersson, Ostrovskis, and Russia fail to render obvious independent claim 16.

Applicant submits that neither Finland nor Japan provide for the deficiencies of Pettersson, Ostrovskis and Russia. Accordingly, the applied combinations of (1) Pettersson, Ostrovskis, Russia and Finland and (2) Pettersson, Ostrovskis, Russia and Japan would not have rendered obvious the features recited in claim 16.

Claims 23-28, being indirectly dependent upon base claim 16, are allowable for at least the same reasons as for the base claim, as well as for the respective additional features recited therein. Therefore, withdrawal of the rejection as to claims 23-28 is respectfully requested.

Conclusion

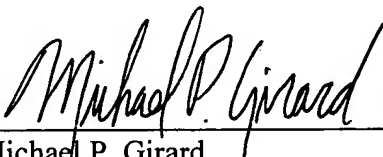
Based on the foregoing, Applicant respectfully submits that the claims are drawn to allowable subject matter and that the application is in condition for allowance. Should the Examiner believe that anything further is necessary to place this application in better condition for allowance, the Examiner is requested to contact Applicant's representative by telephone.

Respectfully submitted,

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